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54 High Frequency surgical device

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Patent Claim 1:

High-frequency (HF) surgical device with at least one HF generator to create HF cutting current and/or coagulation current particularly for endoscopic cutting and coagulation characterized in that one device for the creation of the HF cutting current and/or coagulation current at pre-determined time intervals is provided in which both the duration of the intervals and the pause between a pair of adjacent intervals are adjustable.

The invention concerns a high-frequency surgical device corresponding to the overall concept of Claim 1 that is particularly applicable to endoscopic cuts and coagulations.

Known high-frequency surgical devices create continuous high-frequency alternating current with low modulation for smooth cuts, more or less strongly-modulated alternating current for coagulating or shearing cuts, and strongly-modulated high-frequency alternating current to stop blood flow or to coagulate. The high-frequency alternating current is switched on or off by means of a finger switch or foot switch.

Particularly during endoscopic operations such as polypectomy, paillotomy, or trans-urethral resection, there exists the danger that the cutting electrode cuts too deeply into the tissue because the operator cannot guide the cutting electrode with sufficient accuracy. During such operations, the operator presses the cutting electrode by means of endoscopic instruments against the tissue to be cut or coagulated, and switches the high-frequency alternating current on by means of a finger switch or foot switch. During this, it may occur that the cutting electrode presses more deeply and quickly into the tissue that the operator intended before the high-frequency alternating current may be switched off.

[The drawings show...]

Figure 1 a perspective view of the operating panel of a high-frequency surgical device according to the invention; and

Figure 2 graphic representations to explain the manner of operation of known high-frequency surgical devices in comparison to a high-frequency surgical device according to the invention.